The Fragrant Weed

Some Interesting Details in the Art of Tobacco Culture as Practiced in This Country

By William Henry

IT is believed that there are over fifty different species of the tobacco plant, nearly all of which are natives of the American Continent. Only a few of these varieties, however, are cultivated for use in the tobacco industry.

One variety at least (*Nicotiana Affinis*) is used quite extensively as a decorative plant for horticultural purposes, not only on account of its beautiful, white, star-shaped flower, but also for the exquisite perfume emitted toward evening as the dew begins to fall.

Tobacco may be grown successfully all the way from Canada in the north to Chili in the south, and on a great many kinds of soils; but the soil has so marked an effect on the quality of the leaf that different localities become famous for the excellence of the product raised there.

For the general manufacturing and export trade, a variety called White Burley is extensively grown, principally in the blue grass region of Kentucky, southern Ohio, West Virginia and southeastern Indiana. This variety is light colored and possesses capacity for absorbing the flavoring materials used in making the plug tobacco.

The seed of the tobacco plant is very small, and when sown in the cold frames it is usually mixed with wood ashes or land plaster to show how evenly distributed the seed has been. From the middle of March to the middle of April is the best time to sow the beds in the Connecticut district, and the frames are covered with cheesecloth or glass.

When the plants are about 6 inches high they are ready to transplant, usually from the middle of May to the beginning of June. The fields must be well prepared and heavily fertilized or manured.

The plants are set about 17 inches apart, in rows from 3 ft. 3 in. to 3 ft. 6 in. In large areas a transplanting machine is used to plant the fields.

From now on frequent cultivation and hoeing must be done until the plants are large enough to cover the ground. The tops and suckers are then broken off so as to allow the better development of the leaves.

Harvesting the crop begins when the leaves assume a light shade of green, with light tinted flecks, indicating the ripening of the leaf.

There are two methods of harvesting the crop—one in which the bottom leaves are picked by hand as they ripen, and arranged on sticks or strings to hang in the curing shed. The other method (and which is more generally used) is to cut the plants near the root and leave them in rows to wilt in the sun, so that the plant will not break in handling.

The next process is to "spear" the plants; that is, spit a half dozen plants on a lath about 4 feet long, using a removable metal spear-head on the end of the lath, sliding each stalk along. The laths with the plants are now loaded on a wagon and carted to the large barns, where they are hung in tiers about 12 inches apart and at least 3 feet above the ground. These barns have the sides with alternate boards hinged so as to allow free passage of air and proper ventilation.

The curing of tobacco is one of the most important operations, as the color and quality depend a great deal on the way in which it is cured.

From five to eight weeks are required to complete the cure, as much depends on the state of the weather. Artificial heat is used during cold or wet weather, charcoal fires on the floors of the barns being used, with but little ventilation.

After curing, the plants are then taken down and the leaves stripped from the stalks. This is best done in damp weather, as the leaves are then pliable. The leaves are now placed in neat bundles, which weigh from 50 to 100 pounds and are ready for the market.

As the leaves must undergo another process called sweating or fermentation before being manufactured, they are now, as a rule, handled by the packers, who make a business of the fermentation with their especially equipped plants. This part of the process is quite important as they have to control the humidity, ventilation and temperature. This operation continues from one to two years before the cigars are made.

An idea of the immensity of the tobacco industry in the United States may be formed from the size of the internal revenue tax collected by the government.

In the year 1863 the tax was $3,097,620, and for the year 1919 it had grown to $204,982,560.

North Carolina leads all the other states in the amount of taxes collected, being followed in the order named by New York, Virginia, Pennsylvania, Missouri, Ohio and New Jersey, which are the principal tobacco-growing regions.

1. After cutting, the tobacco is allowed to lie in the sunshine to wilt. 2. Spearing the tobacco; four plants are impaled on a stick to facilitate handling. 3. Using an axe to cut the tobacco plant. 4. The sticks with their impaled plants are loaded on a wagon for transfer to the barns. 5. The immense drying barns have every alternate board hinged, to provide for the free passage of air

Getting our domestic tobacco from the fields of Connecticut to the factory

In Cuba the very finest tobacco is grown in the Vuelta Abajo region. The Connecticut valley has also long been famous for the quality of the tobacco raised there.

In the Connecticut valley, however, hailstorms very often ruin a great part of the crops, and nothing will damage a tobacco field so quickly as a hailstorm. Scientists have not yet been able to explain why the Connecticut valley should be visited by these violent hailstorms. Last year (1920) quite large areas of tobacco fields were destroyed, as the hail cut the leaves to pieces, rendering the crop useless.

The soil in the Connecticut regions is suitable for the fine quality of leaf used in the making of wrappers and binders for cigars, this soil being a sandy loam. The leaves for fillers or inside of the cigars are mostly grown in Pennsylvania, the Miami valley of Ohio, in the Onondaga district of New York and in some regions in Georgia and Florida, the soils required for these purposes being much heavier than that needed for the binder and wrapper of the cigar, but the product does not command such high prices.

Britain's First Commercial Airship

THE first British-built airship adapted to commercial service is the "R-36," her civil registration mark being G.F.A.A.F. She was designed by the Admiralty more than three years ago for naval duties and is a progressive development on earlier types of airships, although she does not embody the marked improvements in design which have been inaugurated during the past year. The "R-36" is the product of the Inchinnan Airship Works of the William Beardmore & Company, Ltd. Construction was begun in the early part of 1919, following the completion and handing over of the "R-34." Completion was deferred, owing to changes in airship policy.

In brief, the "R-36" is 627 feet in length, which is approximately 40 feet less than the length of the "R-34." The maximum diameter of the ship is 78 feet 9 inches. It has a maximum gas capacity of slightly over 2,100,000 cubic feet, giving it a nominal lift of 63.8 tons. The maximum speed is 65 miles an hour, while its normal cruising speed is slightly over 50 miles an hour. It has a maximum range of action of over 4,000 miles. However, the economic range varies according to the number of passengers and the weight of the freight carried.

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Passenger quarters in the British airship "R-36" which is now available for regular commercial service

The design is quite similar to the well-known Zeppelin rigid type, with a gas-containing hull comprising a stream-line skeleton framework of light metallic girders, covered over with heavy fabric. The hull is divided into nineteen compartments, each containing a drum-shaped gas bag. Each gas bag has an automatic gas release valve, while some are fitted with a manually-controlled valve, in order to discharge gas while landing or to alter the trim of the ship. Inside the hull and along the bottom runs the gangway or "cat walk" for the entire length of the ship. The petrol tanks and water ballast bags are arranged along this gangway.

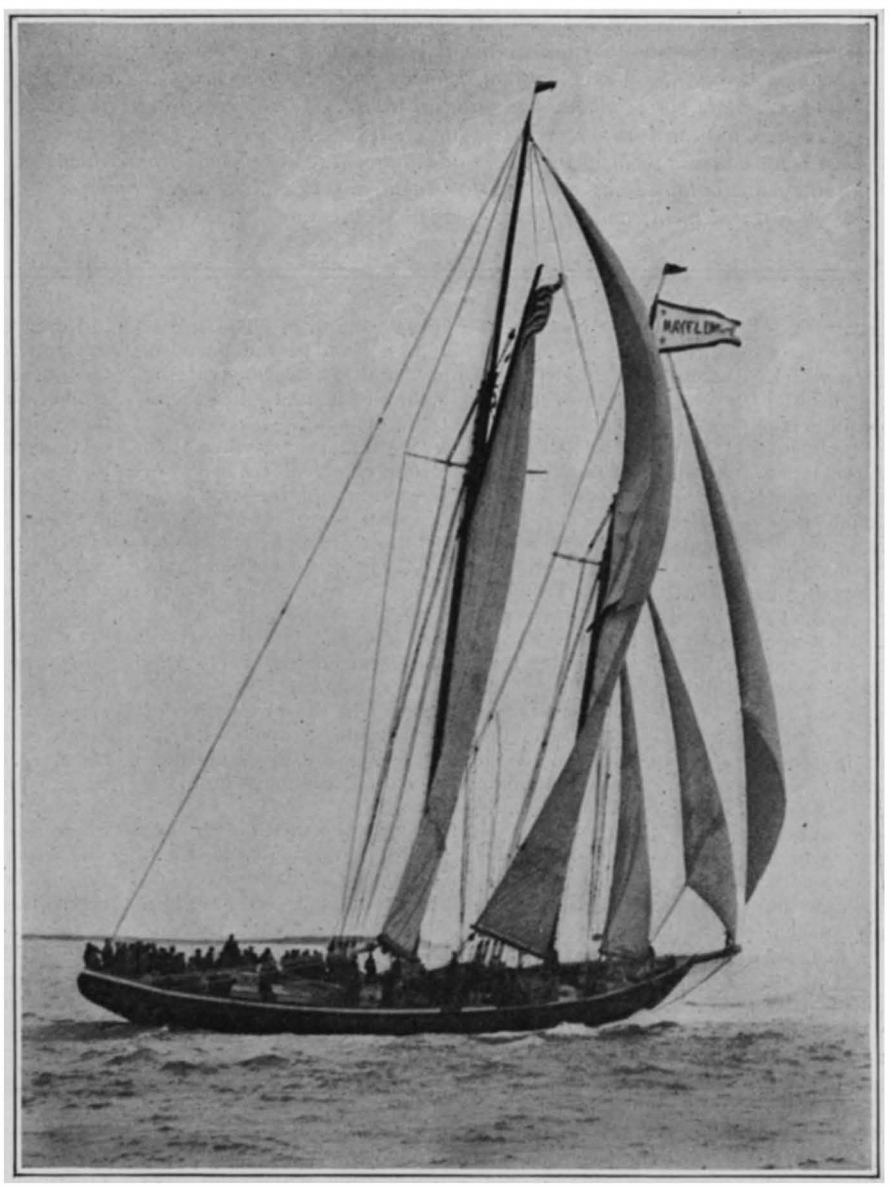
The "R-36" is fitted for mooring at a mast, and at the extreme bow is a trap door, opening outward, which enables passengers and crew to pass to and from the mooring mast when the ship is safely moored. Six cars, five of which are designed to take power units, the sixth being a passenger car, the forward portion of which is used as the control car, are also features of this British airship. Two of these are "wing" cars, placed near the bow of the ship, each containing a 260-horsepower Maybach engine driving direct a two-bladed propeller. The passenger car is placed almost amidships and opposite its center are fitted two or more wing-power cars each of which contains a 350-horsepower Sunbeam "Cossack" engine. The fifth power car is on the central line of the ship, toward the stern, and also contains a 350-horsepower Sunbeam. Each of the three Sunbeam engines drives through a reduction gear and clutch a large two-bladed propeller. These power units give a total of 1,570 horsepower, which is substantially more than that of the "R-34."

Four large fixed stabilizing fins are fitted at the tail of the ship, comprising two vertical and two horizontal members.

An entirely new departure in British airship construction is the fitting of a passenger car which has been designed to accommodate 50 passengers. The car is 131 feet long. It is provided with a passage way that runs down its center. On each side are cabins which are furnished with beds for two passengers, a table and chairs as shown in the accompanying illustration. The general arrangements of the cabins are such that each passenger is provided with a clear and unobstructed view, both inside and outside. The cabins are divided off by curtains at night, which may be drawn back during the day and the beds folded up. The car is also fitted with a cook's galley and a pantry, which are situated in the center of the ship. Good washing and lavatory accommodations are also provided.

A normal crew of four officers and twenty-four men is carried. The officers consist of a captain, first officer pilot, second officer pilot, and engineer officer. The crew consists of 2 coxswains, 7 riggers, 13 engineers and 2 wireless operators. The crew is divided into watches which take alternative spells of duty and rest.

The "R-36" is to be used for long-distance air service, in which it is certain to effect a great saving in time over existing transportation systems. On the England to India service, for instance, the airship voyage would require approximately six days as compared with the fastest overland and mail route of twenty-one days. The "R-36" promises to surpass the service of the German passenger airship, "Bodensee."



The "Mayflower", 141 ft. long over all, 11,000 sq. ft. of sail, designed as a competitor this summer for the annual fisherman's race

Circumventing Orange Thrips by Cleaning Orchard

THE thrip is an insect of economic importance which does extensive damage in orange groves. Although a thrip-scarred orange is exactly as good to eat as a clean orange, the appearance of the fruit, and its consequent selling value, is very much reduced. Any orange grower will tell you that a big crop of thrip-scarred oranges will bring less than a small crop of clean fruit.

A logical orange grower had heard many times that dead leaves and litter in the vineyard were a serious peril, because they sheltered injurious insects. He reasoned that what was true for grapes might well be true for oranges, and straightway made it an annual practice to rake his orange orchard free of leaves and litter late each fall. Intelligent farmers often conduct such experiments for themselves, from long experience holding themselves ready for any result. They realize that some little factor, not taken into account, may destroy the strength of their whole argument.

But this orange grower who fought thrips by raking up leaves and litter each November met with success beyond his expectations. He has followed the practice for several years now, and his orchard produces the cleanest fruit in the whole district. The past season the thrip-scarred oranges averaged not more than one or two to each tree. Other orchards, unraked, in the same locality and growing under similar conditions, suffered heavy damage from thrips.

This grower is conservative. He believes he has hit upon the ridiculously simple, remarkably inexpensive, way to control thrips, and certainly results seem to bear him up. But he suggests that before accepting the experiment as conclusive demonstration, other orchardists should try it out. They will, too! The solution of many an agricultural problem is so simple that it hides, as it were, in its own simplicity. At any rate, it wold seem that this simple expedient of clearing the orchard of leaves and litter is nothing more than what has long been done in other lines to avoid insects.

"Mayflower", Challenger for International Fishing Schooner Cup

JUST at the very time when the ultra-refinement of the hulls and spars of yachts built for the America's Cup races had been carried to the point of absurdity —as witness the refusal of "Resolute" and "Shamrock" to race in the only decent breeze that came their way last summer— at this very time the stout, down-east fishing schooners of Massachusetts, Maine and Nova Scotia came to the rescue.

These craft are staunch, able, strongly-built schooners, which are perfectly at home in the heaviest water that may come their way in the Atlantic, and at the same time can do their 12 to 12½ knots as they race to the westward to carry their catch to the home markets.

Last year's fisherman's race went to the American schooner, and new vessels are being built for the races of the coming summer. Boston has entered the lists by building the handsome schooner of which we show an excellent illustration. The "Mayflower," as she is called, was designed by W. Starling Burgess, well-known son of a famous father, Edward Burgess, who was the designer successively of the "Puritan," the "Mayflower," and the "Volunteer," all three of which successfully defended the America's Cup. Everybody will agree that so far as this picture can tell the story, the "Mayflower" is an able boat with a handsome sheer, high freeboard and a well-cut suit of sails.

With each succeeding contest the competition will grow keener, and the successful schooners will be a little faster than their predecessors. If there should be some good spanking breezes for this season's struggle, it is quite possible that records for speed, in reaching at least, will pass from the America's Cup to the Fishing Schooner Cup class.